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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/656,495 | 09/05/2003 | Steven Jeffrey Goldberg | I-2-0397.1US | 8356 |

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| EXAMINER | |
|---|---|
| NGUYEN, KHAI MINH | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2617 | |

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/656,495 | GOLDBERG, STEVEN JEFFREY | |
| | Examiner | Art Unit | |
| | Khai M. Nguyen | 2617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination (RCE) under 37 CFR 1.114 was filed in this application on 3/22/2006 after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. The request, however, lacks the fee required by 37 CFR 1.17(e) and/or the submission required by 37 CFR 1.114. Accordingly, the RCE is improper and any time period running was not tolled by the filing of the improper request.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shapira, Joseph (W.O 02/15326 A2) in view of Malladi et al. (U.S.Pub-20050130693).

Regarding claim 1, Shapira teaches a wireless communication system for transmitting and receiving wireless communications using at least one beam (fig.1, fig.9, abstract, page.4, line 31 to page.5, line 8) comprising:

a plurality of wireless transmit/receive units (WTRUs); (page 2, lines 19-31, page.5, lines 16-24);

at least one base station having at least one beam forming antenna wherein at least one beam emanating from the beam forming antenna may be dynamically adjusted in at least a vertical dimension (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35); and

a network configured to generate tilt information for dynamically tilting the at least one beam considering an affect that tilting a beam may have on other base station to optimize transmission between the base station and at least one WTRU (fig.10, 11a-11b, page.9, line 31 to page10, line 15, page.14, lines 11-37).

Shapira fails to specially disclose a radio network controller (RNC) configured to generate information for dynamically the at least one beam considering an affect a beam may have on other base station to optimize transmission between the base station and at least one WTRU. However, Malladi teaches a radio network controller (RNC) configured to generate information for dynamically the at least one beam considering an affect a beam may have on other base station to optimize transmission between the base station and at least one WTRU (paragraph 0022-0024, 0028).

Therefore, it have been obvious to one of ordinary skill in the art at the time the invention was made to use a radio network controller (RNC) configured to generate information for dynamically the at least one beam considering an affect a beam may have on other base station to optimize transmission between the base station and at least one WTRU as taught by Malladi with Shapira teaching in order to maintain the integrity of the uplink HS-DPCCH when the UE goes into different cell or sector.

Regarding claim 2, Shapira further teaches the wireless communication system of claim 1 wherein the beam is further dynamically adjusted in a horizontal dimension (fig.10, page 2, lines 11-18, page.13, line 24 to page.25, line 24)

Regarding claim 3, Shapira further teaches the wireless communication system of claim 1 wherein the base station generates control signals for dynamically adjusting the beam in accordance with the tilt information provided by the RNC (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 4, Shapira further teaches the wireless communication system of claim 1 wherein the RNC generates control signals for dynamically adjusting the beam base on the tilt information (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 5, Shapira further teaches the wireless communication system of claim 1 wherein the beam is tilted downward to reduce interference to and from another base station (page.11, lines 17-37).

Regarding claim 6, Shapira further teaches the wireless communication system of claim 1 wherein the beam is dynamically adjusted to account for variations in elevation between the WTRUs (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 7, Shapira further teaches the wireless communication system of claim 1 wherein the beam is dynamically adjusted to break up null areas wherein transmission signals are not decodable (page.14, line 25 to page.15, line 8).

Regarding claim 8, Shapira further teaches the wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in at least a vertical dimension (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Regarding claim 9, Shapira further teaches the wireless communication system of claim 7 wherein the beam is adjusted by dithering the beam in a vertical and horizontal dimension (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Regarding claim 10, Shapira further teaches the wireless communication system of claim 1 wherein the beam is adjusted to provide multiple signals along multiple paths to increase the data rate at which a receiving WTRU may receive data contained within the signals (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Regarding claim 11, Shapira teaches a method for dynamically adjusting beams to optimize transmissions within a wireless communication system (fig.1, fig.9-10, abstract, page.4, line 31 to page.5, line 8, page.9, lines 8-10), the method comprising:

a network computing tilt information in real-time based on actual conditions in a wireless communication system (fig.10, 11a-11b, page.9, line 31 to page10, line 15, page.14, lines 11-37) considering an affect that tilting a beam may have on other base station under the control of the RNC (fig.10, 11a-11b, page.9, line 31 to page10, line 15, page.14, lines 11-37); and

a base station adjusting at least one beam in at least a vertical dimension based on the tilt information (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35).

Shapira fails to specially disclose a radio network controller (RNC) computing information in real-time based on actual conditions in a wireless communication system. However, Malladi teaches a radio network controller (RNC) computing information in real-time based on actual conditions in a wireless communication system (paragraph 0022-0024, 0028). Therefore, it have been obvious to one of ordinary skill in the art at the time the invention was made to use a radio network controller (RNC) computing information in real-time based on actual conditions in a wireless communication system as taught by Malladi with Shapira teaching in order to maintain the integrity of the uplink HS-DPCCH when the UE goes into different cell or sector.

Regarding claim 12, Shapira further teaches the method of claim 11 wherein the tilt information is computed to adjust the beam to minimize interference to and from another antenna (page.11, lines 17-37).

Regarding claim 13, Shapira further teaches the method of claim 11 wherein the tilt information is computed to adjust the beam to account for variations in elevation of WTRUs (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

Regarding claim 14, Shapira further teaches the method of claim 11 wherein the tilt information is computed to dither the beam to break up null areas wherein transmission signals are not decodable (page.14, line 25 to page.15, line 8).

Regarding claim 15, Shapira teaches a wireless communication system for transmitting and receiving wireless communications using at least one beam (fig.1, fig.9, abstract, page.4, line 31 to page.5, line 8) comprising:

a plurality of wireless transmit/receive units (WTRUs) (page 2, lines 19-31, page.5, lines 16-24);

at least one base station having at least one beam forming antenna wherein a beam emanating from the beam forming antenna may be dynamically adjusted in at least a vertical dimension base on tilt information (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24) which is generated by considering an affect that tilting a beam may have on other base stations (fig.9, page 2, lines 11-18, page.13, line 24 to page.25, line 10, page.15, lines 29-35); to optimize transmission between the base station and at least one WTRU (fig.10, 11a-11b, page.9, line 31 to page10, line 15, page.14, lines 11-37);

Shapira fails to specially disclose a radio network controller (RNC), and. However, Malladi teaches a radio network controller (RNC) (paragraph 0028), and a. Therefore, it have been obvious to one of ordinary skill in the art at the time the invention was made to use a radio network controller (RNC) as taught by Malladi with Shapira teaching in order to maintain the integrity of the uplink HS-DPCCH when the UE goes into different cell or sector.

Regarding claim 16, Shapira further teaches the wireless communication system of claim 15 wherein information from the radio network controller and the plurality of

WTRUs is used to compute the tilt information for dynamically adjusting the beam (fig.9-10, page 2, lines 11-18, page.13, line 24 to page.25, line 24).

***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571.272.7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khai Nguyen
AU:2617

4/30/2006

GEORGE ENG
SUPERVISORY PATENT EXAMINER